

Application No.: 10/612,085

Docket No.: 21482-00062-US1

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A lightning arrester device for protecting an electrical circuit connected to a low-voltage network against transient overvoltages, the device comprising:

a plurality of gas-type spark gaps each connected directly in parallel with each other across two common nodes,

wherein each of the plurality of gas-type spark gaps individually has a surge current rating below a desired surge current rating of the device,

wherein each of the plurality of gas-type spark gaps includes a ceramic tube containing a rare gas and having hermetically sealed ends thereon provided by conducting metal dishes which form contact terminals.

wherein each of the conducting metal dishes has a disc-shaped electrode affixed thereto on an internal face.

wherein the disc-shaped electrodes affixed to respective conducting metal dishes oppose each other with a spacing therebetween within the ceramic tube, and

wherein the rare gas is substantially free of hydrogen.

2. (Canceled).

3. (Currently amended) The device of claim 2, claim 1, wherein the disc-shaped electrodes comprise a refractory metal.

4. (Currently amended) The device of claim 2, claim 1, wherein the disc-shaped electrodes comprise tungsten.

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5. (Currently amended) The device of claim 2, claim 1, wherein the disc-shaped electrodes comprise a fusible metal.

6. (Currently amended) The device of claim 2, claim 1, wherein the disc-shaped electrodes comprise copper.

7. (Original) The device of claim 1, further comprising a set of plural varistors connected in parallel, said set of plural varistors being connected in series with the plurality of gas-type spark gaps.

8. (Original) The device of claim 7, further comprising at least one thermal disconnect associated with at least two of the plural varistors,

said at least one thermal disconnect being arranged between the plurality of gas-type spark gaps and the set of plural varistors,

said at least one thermal disconnect being configured to actuate means for visual signaling when one or more of the associated at least two of the plural varistors undergo an abnormal overheating.

9. (Original) The device of claim 8, wherein the plural varistors are grouped in pairs and wherein a thermal disconnect is associated with each pair of varistors.

10. (Original) The device of claim 8, wherein the at least one thermal disconnect is operatively connected to a telesignalling circuit.

11. (Original) The device of claim 7, wherein each of the plural varistors connected in parallel has a 1 mA clipping voltage within $\pm 1\%$.

12. (Currently amended) The device of claim 2, claim 1, wherein the ceramic tube comprises at least one thread of graphite on an inner surface thereof.

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13. (Canceled).

14. (Currently amended) The device of ~~claim 2, claim 1,~~ wherein an inner configuration of the ceramic tube and a hydrogen content of the rare gas are selected to cause an essentially simultaneous tripping of at least two of the plurality of gas-type spark gaps in response to a transient over-voltage condition.